

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES

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In re Application of:	:	Examiner: Archene A. Turner
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Peter REHBEIN et al.	:	
	:	
For: CONTACT SURFACES FOR	:	
ELECTRICAL CONTACTS	:	
	:	Art Unit: 1794
Filed: January 19, 2007	:	
	:	
Serial No.: 10/574,879	:	
-----X		

Mail Stop Appeal Brief - Patents  
 Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, VA 22313-1450

I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office via the Office electronic filing system on **May 11, 2009**.

Signature: /Wendy Espinal/  
 Wendy Espinal

**APPEAL BRIEF TRANSMITTAL**

SIR:

Transmitted herewith for filing in the above-identified patent application, please find an Appeal Brief pursuant to 37 C.F.R. § 41.37. A two-month period to respond to the Notice of Appeal filed March 11, 2009 expires on May 11, 2009.

The **\$540** Appeal Brief fee is being **paid by credit card**.

The Commissioner is also authorized to charge payment of any additional fees or to credit any overpayment to Deposit Account No. **11-0600** of Kenyon & Kenyon LLP.

Respectfully submitted,

Dated: May 11, 2009

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**APPEAL BRIEF PURSUANT TO 37 C.F.R. § 41.37**

SIR:

On March 11, 2009, Appellants filed a Notice of Appeal from the last decision of the Examiner contained in the Final Office Action dated November 14, 2008 in the above-identified patent application.

In accordance with 37 C.F.R. § 41.37, this brief is submitted in support of the appeal of the rejections of claims 9 to 14, 17, and 18. For at least the reasons set forth below, the final rejections of claims 9 to 14, 17, and 18 should be reversed.

**1. REAL PARTY IN INTEREST**

The real party in interest in the present appeal is ROBERT BOSCH GmbH of Stuttgart in the Federal Republic of Germany, which is the assignee of the entire right, title and interest in and to the present application.

**2. RELATED APPEALS AND INTERFERENCES**

There are no other prior or pending appeals, interferences or judicial proceedings known by the undersigned, or believed by the undersigned to be known to Appellants or the assignee, ROBERT BOSCH GmbH, "which may be related to, directly

affect or be directly affected by or have a bearing on the Board's decision in the pending appeal."

### **3. STATUS OF CLAIMS**

Claims 1 to 8, 15, and 16 have been canceled.

Claims 9 to 14, 17, and 18 are pending.

Claim 13 stands rejected under the second paragraph of 35 U.S.C. § 112 as to the definiteness requirement.

Claims 9 to 14, and 18 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,199,553 ("Shinohara et al.").

Claim 17 stands rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Shinohara et al. and U.S. Patent No. 5,967,860 ("Ricketts et al.").

A copy of the appealed claims, *i.e.*, claims 9 to 14, 17, and 18, is attached hereto in the Claims Appendix.

### **4. STATUS OF AMENDMENTS**

In response to the Final Office Action dated November 14, 2008, Appellants submitted a "Reply Under 37 C.F.R. § 1.116" ("the Reply") on January 22, 2009. The Reply did not include any amendments to the claims. As such, it is Appellants' understanding that the claims as included in the annexed "Claims Appendix" reflect the current status of the claims.

### **5. SUMMARY OF CLAIMED SUBJECT MATTER**

Independent claim 9 relates to a contact surface for an electrical contact. *Specification*, page 4, lines 10 to 15; and Abstract. Claim 9 recites that the contact surface includes an Ag layer galvanically deposited on a copper-based substrate. *Specification*, page 4, lines 17 to 20; and Abstract. Claim 9 recites that the Ag layer includes finely dispersed graphite particles in a quantity of between 1 and 3 weight % of the Ag layer, the graphite particles having a length in a range of 0.5 to 20  $\mu\text{m}$ . *Specification*, page 4, line 31 to page 5, line 4; and Abstract. Claim 9 recites that each of the graphite particles does not simultaneously include a maximum thickness and a maximum width. *Specification*, page 5, lines 4 to 6.

Independent claim 17 relates to a method. *Specification*, page 4, lines 10 to 15; and Abstract. Claim 17 recites that the method includes providing a contact surface in an

automotive plug connection in close proximity to an engine. *Specification*, page 5, lines 21 to 23. Claim 17 recites that the contact surface includes an Ag layer galvanically deposited on a copper-based substrate. *Specification*, page 4, lines 17 to 20; and Abstract. Claim 17 recites that the Ag layer includes finely dispersed graphite particles in a quantity of between 1 and 3 weight % of the Ag layer, the graphite particles having a length in a range of 0.5 to 20  $\mu\text{m}$ . *Specification*, page 4, line 31 to page 5, line 4; and Abstract. Claim 17 recites that each of the graphite particles does not simultaneously include a maximum thickness and a maximum width. *Specification*, page 5, lines 4 to 6.

**6. GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

- A. Whether claim 13 satisfies the definiteness requirement under the second paragraph of 35 U.S.C. § 112.
- B. Whether claims 9 to 14, and 18 are anticipated under 35 U.S.C. § 102(b) by Shinohara et al.
- C. Whether claim 17 is patentable under 35 U.S.C. § 103(a) over the combination of Shinohara et al. and Ricketts et al.

**7. ARGUMENTS**

**A. Rejection of Claim 13 Under Second Paragraph of 35 U.S.C. § 112**

Claim 13 stands rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite. It is respectfully submitted that claim 13 is sufficiently definite for at least the following reasons.

As shown in the Figure, the graphite particles 14 may be arranged in the plane of the Ag layer 12 such that the particles 14 exhibit different properties along different axes, i.e., anisotropically. For example, the particles 14 may have different length, width, and thickness dimensions within the plane of the Ag layer 12. (*Specification*, p. 5, lines 1 to 9). Thus, it is respectfully submitted that one having ordinary skill in the art would understand the feature of claim 13 of the graphite particles 14 being arranged either anisotropically or statistically along a habitus plane of the Ag layer 12.

Accordingly, it is respectfully submitted that the present claims sufficiently “set forth and circumscribe a particular subject matter with a reasonable degree of clarity and precision,” which is all that is required under 35 U.S.C. § 112, second paragraph.

In view of all of the foregoing, reversal of this rejection is respectfully requested.

**B. Rejection of Claims 9 to 14, and 18 Under 35 U.S.C. § 102(b)**

Claims 9 to 14, and 18 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,199,553 (“Shinohara et al.”). It is respectfully submitted that Shinohara et al. does not anticipate the present claims for at least the following reasons.

To anticipate a claim, each and every element as set forth in the claim must be found in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of Calif.*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Furthermore, “[t]he identical invention must be shown in as complete detail as is contained in the . . . claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). That is, the prior art must describe the elements arranged as required by the claims. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). In other words, to be anticipatory, a single prior art reference must show all of the limitations of the claims arranged or combined in the same way as recited in the claims. *Net MoneyIN, Inc. v. Verisign, Inc.*, 545 F.3d 1359 (Fed. Cir. 2008).

Claim 9 relates to a contact surface for an electrical contact, including, *inter alia*, an Ag layer galvanically deposited on a copper-based substrate, the Ag layer including finely dispersed graphite particles, in which *each of the graphite particles does not simultaneously include a maximum thickness and a maximum width*.

Shinohara et al. does not identically disclose, or even suggest, all of the claimed features of claim 9. Shinohara et al. merely indicates an Ag coating layer that includes graphite particles of various sizes. In this regard, Shinohara et al. merely mentions graphite particles having varying long and short diameter dimensions. Col. 15, lines 6 to 8, and 12 to 14; and col. 18, lines 41 to 43, and 58 to 60. Further, Shinohara et al. states at col. 19, lines 62 to 63 that “the particle size of C must be determined on the basis of all the factors.” Indeed, the Office Action of January 11, 2008 admits at page 5 that “[t]he particles of the graphite powder [of Shinohara et al.] appear to have random length, thickness and width.” Thus, nowhere does Shinohara et al. even mention that each of the graphite particles does not simultaneously include both a maximum thickness and a maximum width. Indeed, by having random length, thickness and width, it is likely that some of the graphite particles of Shinohara et al. include both a maximum thickness and a maximum width. Therefore, Shinohara et al. does not identically disclose, or even suggest, the feature in which *each of the graphite particles does not simultaneously include a maximum thickness and a maximum width*.

Accordingly, Shinohara et al. does not identically disclose, or even suggest, all of the features included in claim 9. As such, it is respectfully submitted that Shinohara et al. does not anticipate claim 9.

As for claims 10 to 14, and 18, which depend from and therefore include all of the features included in claim 9, it is respectfully submitted that Shinohara et al. does not anticipate these dependent claims for at least the same reasons more fully set forth above.

In view of all of the foregoing, reversal of this rejection is respectfully requested.

**C. Rejection of Claim 17 Under 35 U.S.C. § 103(a)**

Claim 17 stands rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Shinohara et al. and U.S. Patent No. 5,967,860 (“Ricketts et al.”). It is respectfully submitted that the combination of Shinohara et al. and Ricketts et al. does not render unpatentable the presently pending claim for at least the following reasons.

In order for a claim to be rejected for obviousness under 35 U.S.C. § 103(a), the prior art must teach or suggest each element of the claim. *See Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 934 (Fed. Cir. 1990), *cert. denied*, 111 S. Ct. 296 (1990); *In re Bond*, 910 F.2d 831, 834 (Fed. Cir. 1990). In addition, as clearly indicated by the Supreme Court, it is “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed. *See KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). Further, the Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. M.P.E.P. §2143.

Claim 17 includes features analogous to claim 9. As more fully set forth above, Shinohara et al. does not disclose, or even suggest, the feature in which *each of the graphite particles does not simultaneously include a maximum thickness and a maximum width*. Ricketts et al. also does not disclose, or even suggest, this feature, and thus, fail to cure this critical deficiency.

Moreover, the Office Actions to date fail to set forth a *prima facie* case of obviousness consistent with the Supreme Court’s *KSR* decision and consistent with the provisions set forth in M.P.E.P. § 2142 *et seq.* A rejection under 35 U.S.C. § 103(a) cannot be sustained with mere conclusory statements; rather, according to the *KSR* decision, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. Although the *KSR* decision and the M.P.E.P. set forth several

rationales (including: (a) combining prior art elements according to known methods to yield predictable results; (b) simple substitution of one known element for another to obtain predictable results; (c) use of known technique to improve similar devices (methods, or products) in the same way; (d) applying a known technique to a known device (method, or product) ready for improvement to yield predictable results; (e) “obvious to try” -- choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success; (f) known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art; and (g) some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention) that may support a conclusion of obviousness, along with the necessary findings that must be articulated in order to rely on each of these rationales, none of the Office Actions to date adequately identify the rationale, if any, upon which the present rejection is based and does not articulate the requisite findings. Rather, the Final Office Action merely states at page 3 that “[t]he rejection is maintained for reasons of record in previous office action,” and the Office Action of January 11, 2008 merely, and conclusorily, contends at page 6 that “[i]t would have been obvious to one of ordinary skill in the art at the time of the invention to use the contact of Shinohara in an automotive application suggested by Ricketts, since the contacts of Shinohara are disclosed as useful in a wide variety of applications and since Ricketts suggests comparable contact structures are specifically useful in automotive applications.” The foregoing is plainly insufficient to support a *prima facie* case of obviousness consistent with the *KSR* decision and consistent with the provisions set forth in M.P.E.P. § 2142 *et seq.*

Accordingly, it is respectfully submitted that the combination of Shinohara et al. and Ricketts et al. does not render unpatentable claim 17.

In view of all of the foregoing, reversal of this rejection is respectfully requested.

## **8. CLAIMS APPENDIX**

A “Claims Appendix” is attached hereto and appears on the two (2) pages numbered “Claims Appendix 1” to “Claims Appendix 2.”

**9. EVIDENCE APPENDIX**

No evidence has been submitted pursuant to 37 C.F.R. §§ 1.130, 1.131 or 1.132. No other evidence has been entered by the Examiner or relied upon by Appellants in the appeal. An “Evidence Appendix” is nevertheless attached hereto and appears on the one (1) page numbered “Evidence Appendix.”

**10. RELATED PROCEEDINGS APPENDIX**

As indicated above in Section 2, “[t]here are no other prior or pending appeals, interferences or judicial proceedings known by the undersigned, or believed by the undersigned to be known to Appellants or the assignee, ROBERT BOSCH GmbH, ‘which may be related to, directly affect or be directly affected by or have a bearing on the Board’s decision in the pending appeal.’” As such, there are no “decisions rendered by a court or the Board in any proceeding identified pursuant to [37 C.F.R. § 41.37(c)(1)(ii)]” to be submitted. A “Related Proceedings Appendix” is nevertheless attached hereto and appears on the one (1) page numbered “Related Proceedings Appendix.”

**11. CONCLUSION**

For at least the reasons indicated above, Appellants respectfully submit that the art of record does not disclose or suggest the subject matter as recited in the claims of the above-identified application. Accordingly, it is respectfully submitted that the subject matter as set forth in the claims of the present application is patentable.

In view of all of the foregoing, reversal of all of the rejections set forth in the Final Office Action is therefore respectfully requested.

Respectfully submitted,

Dated: May 11, 2009

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## **CLAIMS APPENDIX**

9. A contact surface for an electrical contact, comprising:

an Ag layer galvanically deposited on a copper-based substrate, the Ag layer including finely dispersed graphite particles in a quantity of between 1 and 3 weight % of the Ag layer, the graphite particles having a length in a range of 0.5 to 20  $\mu\text{m}$ ;

wherein each of the graphite particles does not simultaneously include a maximum thickness and a maximum width.

10. The contact surface according to claim 9, wherein the graphite particles have a length in the range of 1 to 10  $\mu\text{m}$ .

11. The contact surface according to claim 9, wherein the graphite particles have a thickness in the range of 0.05 and 2  $\mu\text{m}$ .

12. The contact surface according to claim 9, wherein a ratio of thickness to length of the graphite particles is in the range of 1:2 to 1:40.

13. The contact surface according to claim 9, wherein the graphite particles are arranged at least one of (a) anisotropically and (b) statistically along a habitus plane of the Ag layer.

14. The contact surface according to claim 9, wherein a layer thickness of the Ag layer is in the range of approximately 1 to approximately 10  $\mu\text{m}$ .

17. A method, comprising:

providing a contact surface in an automotive plug connection in close proximity to an engine, the contact surface including an Ag layer galvanically deposited on a copper-based substrate, the Ag layer including finely dispersed graphite particles in a quantity of between 1 and 3 weight % of the Ag layer, the graphite particles having a length in a range of 0.5 to 20  $\mu\text{m}$ ;

wherein each of the graphite particles does not simultaneously include a maximum thickness and a maximum width.

18. The contact surface according to claim 9, wherein the graphite particles have a width in the range of 0.05 and 2  $\mu\text{m}$ .

### **EVIDENCE APPENDIX**

No evidence has been submitted pursuant to 37 C.F.R. §§1.130, 1.131, or 1.132. No other evidence has been entered by the Examiner or relied upon by Appellants in the appeal.

### **RELATED PROCEEDINGS APPENDIX**

As indicated above in Section 2 of this Appeal Brief, “[t]here are no other prior or pending appeals, interferences or judicial proceedings known by the undersigned, or believed by the undersigned to be known to Appellants or the assignee, ROBERT BOSCH GmbH, ‘which may be related to, directly affect or be directly affected by or have a bearing on the Board’s decision in the pending appeal.’” As such, there are no “decisions rendered by a court or the Board in any proceeding identified pursuant to [37 C.F.R. § 41.37(c)(1)(ii)]” to be submitted.